

IN THE CLAIMS

1. (Currently amended) A device for heating and/or air conditioning the passenger compartment of a motor vehicle, comprising an engine-cooling loop in which a heat-carrying fluid circulates for taking up heat from the engine and returning the heat to an air heater; a heat-pump loop in which a refrigerant fluid circulates, said heat-pump loop containing a compressor, a first evaporator constituting a cold source of the heat pump at which the refrigerant fluid takes up heat from the surroundings, and a first condenser constituting a hot source of the heat pump at which the refrigerant fluid gives up heat, the first condenser being integrated into the engine-cooling loop upstream of the air heater, the device further comprising an air-conditioning branch containing a second condenser and a second evaporator, the air-conditioning branch having an upstream end connected to the heat-pump loop downstream of the compressor, and a downstream end connected to the heat-pump loop upstream of the compressor, and a switching device making it possible to make the refrigerant fluid circulate either in the air-conditioning branch, or in the heat-pump branch, in such a way as to form a heat-pump loop

~~wherein the cooling loop includes a first valve system to control the quantity of heat-carrying fluid which passes through the first condenser and the heat pump loop includes a second valve system to control the quantity of heat-carrying fluid which passes through the first evaporator,~~

~~wherein said first and second valve system systems are adapted to regulate an intake pressure of said compressor.~~

2. (original) The device of Claim 1, wherein the evaporator of the heat-pump loop is integrated into the cooling loop, upstream of the engine.

3. (original) The device of Claim 1, wherein the evaporator takes up heat from surroundings external to the engine-cooling circuit.

4-7. (canceled)

8. (original) The device of Claim 1, wherein the air-conditioning branch includes a refrigerant-fluid accumulator.

9. (original) The device of Claim 8, wherein the evaporator constitutes a refrigerant-fluid accumulator common to the air-conditioning loop and to the heat-pump loop.

10. (original) The device of Claim 1, wherein the air-conditioning branch includes an anti-return valve.

11. (original) The device of Claim 1, wherein the heat-pump loop includes pressure-reducing means for reducing the pressure of the refrigerant fluid between the condenser and the evaporator.

12. (Currently amended) A device for heating and/or air conditioning the passenger compartment of a motor vehicle, comprising an engine-cooling loop in which a heat-carrying fluid circulates for taking up heat from the engine and returning the heat to an air heater; a heat-pump loop in which a refrigerant fluid circulates, said heat-pump loop containing a compressor, a first evaporator constituting a cold source of the heat pump at which the refrigerant fluid takes up heat from the surroundings, and a first condenser constituting a hot source of the heat pump at which the refrigerant fluid gives up heat, the first condenser being integrated into the engine-cooling loop upstream of the air heater, the device further comprising an air-conditioning branch containing a second condenser and a second evaporator, the air-conditioning branch having an upstream end connected to the heat-pump loop downstream of the compressor, and a downstream end connected to the heat-pump loop upstream of the compressor, and a switching device making it possible to make the refrigerant fluid circulate either in the air-conditioning branch, or in the heat-pump branch, is such a way as to form a heat-pump loop, and

further comprising a modular casing containing the first evaporator, first valve system of the first evaporator for controlling the quantity of heat-carrying fluid which passes through the first evaporator an anti-return valve upstream of the evaporator, the first condenser, second valve system of the first condenser for controlling the quantity of heat-carrying fluid which passes through the first condenser, the switching device and a pressure-reduction means of the heat-pump loop for reducing the pressure of the refrigerant fluid between the first condenser and the first evaporator,

wherein said first valve system is operatively connected with said ~~and~~ second valve systems ~~are adapted to regulate~~ to control an intake pressure of said compressor.

13. (original) The device of Claim 1, wherein the engine is an internal-combustion engine.

14. (original) The device of Claim 1, wherein the engine is an electric motor.

15. (New) The device of Claim 1, wherein the device further comprises an evaporator heat regulating loop comprising a first valve system operatively connected to a heat source and fluidly connected to said first evaporator, said first valve system controlling the amount of heat transferred to said evaporator and thereby controlling an inlet pressure to said compressor.

16. (New) The device of Claim 15 wherein said heat source comprises one of an exhaust pipe or an oil circuit within said engine.

17. (New) The device according to claim 15 wherein said first valve system is comprised of an evaporator valve and an evaporator bypass valve, said evaporator valve allowing an evaporator heating fluid to flow to said first evaporator and thereby transfer heat to said first evaporator, said evaporator bypass valve allowing fluid to bypass said first evaporator.

18. (New) The device of Claim 1, further comprising a valve system operatively connecting said engine cooling loop to said first condenser when additional heating capacity is required, when no additional heating capacity is required said valve system operatively disconnects said first condenser from said engine cooling loop.

19. (New) The device according to claim 18 wherein said valve system is comprised of a condenser valve and a condenser bypass valve, said condenser valve is connected to said engine cooling loop to allow said heat-carrying fluid to flow to said first condenser and thereby allow heat to be transferred to said heat-carrying fluid in said engine cooling loop, said condenser bypass valve is connected to said engine cooling loop to allow said heat-carrying fluid to bypass said condenser so that no heat is transferred from said first condenser to said heat-carrying fluid.

20. (New) The device according to claim 15 further comprising a second valve system wherein said engine cooling loop is operatively connected to said first condenser by said second valve system when additional heating capacity is required, and operatively disconnected from said first condenser by said second valve system when no additional heating capacity is required.

21. (New) The device according to claim 15 wherein said second valve system comprises a condenser valve and a condenser bypass valve, said condenser valve allowing fluid to flow to said first condenser and thereby transfer heat to said heat-carrying fluid in said engine cooling loop, said condenser bypass valve allowing fluid to bypass said condenser so that no heat is transferred from said first condenser to said heat-carrying fluid.

22. (New) The device according to claim 21 wherein said second valve system is adapted to control the loading of said compressor.

23. (New) The device of Claim 1 wherein the cooling loop includes a first valve system to control the quantity of heat-carrying fluid which passes through the first condenser and the heat-pump loop includes a second valve system to control the quantity of heat-carrying fluid which passes through the first evaporator,

wherein said first and second valve system systems control an intake pressure of said compressor.